

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 March 2004 (11.03.2004)

PCT

(10) International Publication Number
WO 2004/020484 A1

(51) International Patent Classification⁷: **C08F 8/14**,
C08L 29/14, C08F 8/28, C08K 5/06, B41C 1/10, B41M
5/36, 5/40

6, 37412 Herzberg (DE). SAVARIAR-HAUCK, Celin
[MY/DE]; Am Breitenberge 14, 37534 Badenhausen (DE).

(21) International Application Number:
PCT/EP2003/009550

(74) Agent: VOSSIUS & PARTNER; Siebertstrasse 4, 81675
München (DE).

(22) International Filing Date: 28 August 2003 (28.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
102 39 505.5 28 August 2002 (28.08.2002) DE

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except US*): KODAK
POLYCHROME GRAPHICS GMBH [DE/DE]; An der
Bahn 80, 37520 Osterode/Harz (DE).

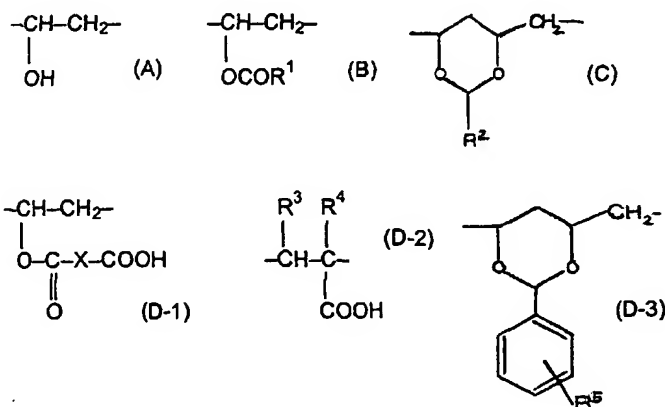
(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SI, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and
(75) Inventors/Applicants (*for US only*): TIMPE,
Hans-Joachim [DE/DE]; Baumhofstrasse 165, 37520
Osterode (DE). MÜLLER, Ursula [DE/DE]; Jüssweg

Published:
— with international search report

[Continued on next page]

(54) Title: HEAT-SENSITIVE POSITIVE WORKING LITHOGRAPHIC PRINTING PLATE PRECURSOR WITH A HIGH RESISTANCE TO CHEMICALS



(57) Abstract: Heat-sensitive element comprising (a) an optionally pre-treated substrate (b) a positive working heat-sensitive coating comprising (i) at least one novolak resin, (ii) at least one component which reduces the aqueous alkaline developer solubility of novolak, wherein said reduction in solubility is reversed upon the application of heat, and (iii) at least one acidic polyvinyl acetal comprising the structural units (A), (B), (C) (A) (B) (C) and (D) wherein (D) is at least one unit selected from (D-1), (D-2), and (D-3): (D-1) (D-2) (D-3) wherein R¹ is a hydrogen atom or a C₁-C₄ alkyl group, R² is a hydrogen atom or a C₁-C₁₈ alkyl group, R³ is a hydrogen atom or a C₁-C₄ alkyl group, R⁴ is a hydrogen atom or a C₁-C₄ alkyl group, R⁵ is -COOH, -(CH₂)_n-COOH, -O-(CH₂)_n-COOH, -SO₃H, -PO₃H₂ or -PO₃H, a is an integer from 1 to 8, and X is selected from -(CR⁶R⁷)_n- and -CR⁸=CR⁹, wherein n is an integer of 1 to 6, each R⁶ and R⁷ is independently selected from a hydrogen atom and C₁-C₆ alkyl group, and R⁸ and R⁹ are independently selected from a hydrogen atom and a C₁-C₆ alkyl group or R⁸ and R⁹ together with the two carbon atoms to which they are bonded, form an optionally substituted aryl or heteroaryl group, wherein components (i) and (ii) do not have to be present as separate substances but may be used in the form of an appropriately functionalized novolak.